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10/774,508

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Ching-Jim Lin

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ROSENBERG, KLEIN & LEE  
3458 ELLICOTT CENTER DRIVE-SUITE 101  
ELLICOTT CITY, MD 21043

EXAMINER

HARVEY, DAVID E

ART UNIT

PAPER NUMBER

2621

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/774,508 | <b>Applicant(s)</b><br>LIN, CHING-JIM |  |
|                              | <b>Examiner</b><br>DAVID E. HARVEY   | <b>Art Unit</b><br>2621               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**1. Claims 20-22 are objected to because of the following informalities:**

- a) In line 3 of claim 20, the second occurrence of “disc” should read –drive--.
- b) In lines 2-3 of claim 18, it appears that “or” should come before “SPDIF-type.

**Appropriate correction is required.**

**2. The following is a quotation of the first paragraph of 35 U.S.C. 112:**

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**3. Claims 2, 3, 7, and 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.**

A) Claim 2 recites a “power jacket.” It is unclear from the instant specification as to what the terminology means and used and claimed in the context of the instant specification. Clarification is required. Similar clarification is needed for claim 3.

B) Claim 7 recites a “bank wire.” It is unclear from the instant specification as to what the terminology means and used and claimed in the context of the instant specification. Clarification is required. Similar clarification is needed for claim 8.

**4. Claims 10-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.**

1) Lines 6-9 of claim 10 (and lines 4-5 of claim 20) recite a “**network connection card**” that can be inserted into the plug of a computer drive and connected to a first interface connector for the purpose of retrieving audio and video data from the drive. The instant disclosure provides no details and instead appears to take the position that the required “network connection card” is merely a specific type of “utility card” known to those of ordinary skill in the art. The examiner maintains that the disclosure is not enabling of that which is claimed; i.e., that one skilled in the art would not have known how to implement the required “network connection card,” given the lack of description thereof. In response to this Office action, applicant should provide evidence showing that the recited “network connection card,” i.e., one capable of providing the recited operation, was known to those of ordinary skill in art at the time of applicant’s invention (or at least showing that that one of ordinary skill in the art would have known how to make such a card from the instant disclosure).

2) With respect to claim 11, applicant should provide evidence showing that the recited “network connection card,” i.e., one capable of providing the operation set forth in claim 10 in both wired and wireless configurations, was known to those of ordinary skill in art at the time of applicant’s invention (or at least showing that that one of ordinary skill in the art would have known how to make such a card from the instant disclosure).

3) With respect to claim 21, applicant should provide evidence showing that the recited “network connection card,” i.e., one capable of providing the operation set forth in claim 20 in both wired and wireless configurations, was known to those of ordinary skill in art at the time of applicant’s invention (or at least showing that that one of ordinary skill in the art would have known how to make such a card from the instant disclosure).

4) Lines 7-11 claim 13 recite a “**video/audio multi-media card**” that can be inserted into the plug of a computer drive and connected to a first interface connector thereof for the purpose of retrieving audio and video data from a broadcasting device and outputting the data to the drive. The instant disclosure provides no details as to the structure of such a “multi-media card” and instead appears to take the position that the required “multi-media card” is merely a specific type of “utility card” known to those of ordinary skill in the art. The examiner maintains that the disclosure is not enabling of that which is claimed; i.e., that one skilled in the art would not have known how to implement the required “video/audio multi-media card” given the lack of description thereof. In response to this Office action, applicant should provide evidence showing that the recited “video/audio multi-media card”, i.e., one capable of providing the recited operation, was known to those of ordinary skill in art at the time of applicant’s invention (or at least showing that that one of ordinary skill in the art would have known how to make such a card from the instant disclosure).

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5) With respect to claim 14, applicant should provide evidence showing that the recited "video/audio multi-media card," i.e., one capable of providing the operation set forth in claim 13 and capable of retrieving audio and video data from each of a television, a computer optical disc, a cassette type recorder, a camera, and a set-top box, was known to those of ordinary skill in art at the time of applicant's invention (or at least showing that that one of ordinary skill in the art would have known how to make such a card from the instant disclosure).

6) With respect to claim 15, applicant should provide evidence showing that the recited "video/audio multi-media card," i.e., one capable of providing the operation set forth in claim 13 and compatible with each of the H.263, H263+, H.264, MPEG, JPEG, JPEG-2000, Motion-JPEG, and Motion-JPEG2000 video specifications, was known to those of ordinary skill in art at the time of applicant's invention (or at least showing that that one of ordinary skill in the art would have known how to make such a card from the instant disclosure).

7) With respect to claim 16, applicant should provide evidence showing that the recited "video/audio multi-media card," i.e., one capable of providing the operation set forth in claim 13 and compatible with each the MPEG Layer 1/2/3, AC-3, AAC, and DTS audio specifications, was known to those of ordinary skill in art at the time of applicant's invention (or at least showing that that one of ordinary skill in the art would have known how to make such a card from the instant disclosure).

8) With respect to claim 18, applicant should provide evidence showing that the recited "video/audio multi-media card," i.e., one capable of providing the operation set forth in claim 13 and compatible with a cable of the AV-type, S-type, RGB-type, TPbPr-type, YCbCr-type, microphone type, and SPDIF-type, was known to those of ordinary skill in art at the time of applicant's invention (or at least showing that that one of ordinary skill in the art would have known how to make such a card from the instant disclosure).

**5. The following is a quotation of the second paragraph of 35 U.S.C. 112:**

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**6. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

1) In claim 1, line 4, the recitation that the plug is “***positioned outside of the main body***” of the recited optical disc drive is confusing and appears to be misdescriptive. Specifically, turning to the Figures of the instant specification (e.g., 1 and 5), it appears that the “plug” (e.g., @ 11) is not actually “positioned outside of the main body”, but rather is positioned to be accessible from the outside of the main body; i.e., via an opening in main body. Clarification is required. Similar clarification is needed in line 4 of claim 10 and line 4 of claim 13.

**7. State of the disc/disk drive art at the time of the invention:**

**A)** The examiner maintains that it was well known in art that computer disc/disk drives, regardless of type, *typically* comprises a “printed circuit board” comprising:

- 1) The control circuitry for the disc/disk drive mounted thereon; and
- 2) A plug member for mechanically connecting the drive to a device that is external to the drive.

The following “prior art” references are cited in support of the examiner’s position:

- 1) U.S. Patent #6,764,344 to Maiers which states:

***“[A]n embodiment of the present invention is a disc drive having a disc mounted for rotation on a spindle motor. The disc drive includes a printed circuit board and means for mechanically connecting the circuit board to a device outside the disc drive.”***

[Lines 37-42 of column 2]

- 2) U.S. Patent #6,574,118 to Russell et al. which states:

***“Conventional disk drives typically include a base plate and cover that is detachably connected to the base plate to define a housing for various disk drive components”***

[Lines 24-26 of column 1]

***“Another component of the disk drive is a printed circuit board assembly that includes a printed circuit board and appropriate drive interface connector. The printed circuit board operatively interconnects various components of the disk drive with a central processing unit or the like”***

[Lines 50-54 of column 1]

**B)** The examiner maintains that it was well known in the art for a computer to be attached to external storage devices via mechanical plugs conforming to any of the various well known specifications: e.g.,

- 1) U.S. Patent #6,859,854 Kwong which states:

***“It is known that there are different types of input/output ports (such as IDE, USB, PCMCIA, and Firewire or IEEE1394) available for a personal computer nowadays to connect with various kinds of data storage devices, especially the external data storage devices.”***

[Lines 13-18 of column 1]

**8. The following references are cited as illustrating “prior art” computer disc/disk drive that were configured to include the appropriate processing circuitry and interface so as to enable the drive to be accessed directly by peripheral devices (i.e, that do not require access to be made via the CPU of the computer):**

**A)** U.S. Patent Document #2004/0088456 to Zhang describes various configurations [e.g., represented by Figures 3AA, 3BB, 3BA, 3BB, 3CA, 3CB, 4A, 4B, 4C, 4D, 4E, 4F, 5A, 5B, 5C, 5D, 6AA, 6AB, 6B, 6C, 6D, 10A, 10BB, 10BC10CA, 10CB, 10CC] of a smart hard-disk drive (sHDD) for a computer wherein:

- 1) The circuitry of the sHDD may include its own intelligent circuitry such as a microprocessor and may be integrated on a single circuit or “mother” board [e.g., note paragraphs 0054, 0055, and 0060-0062]; and
- 2) The circuitry of the sHDD may be powered by internal batteries and/or may be configured to receive power from the peripheral device that is communicating therewith [e.g., note paragraphs 0025, 0050, 0053, 0065]

**B)** European Patent Document #EP 0,720,157 A2 to Sugie et al. describes an optical disc drive that is configured to include appropriate processing circuitry and interface circuitry/connectors [e.g., Figures 1, 2, 3, and 4] so as to enable the optical disc drive to communicate directly with devices that are peripheral to the PC [e.g., note lines 53-57 of column 2; lines 41-50 of column 3; and lines 40-42 of column 4].

**C)** U.S. Patent #6,078,966 to Kobayashi et al. describes an optical disc drive that can be attached to [e.g., Figures 4 and 7] or incorporated within [e.g., Figure 1 and 6] a personal computer (PC) [note lines 13-17 of column 1]. As discloses, the drive is configured to include appropriate processing circuitry and interface circuitry/connectors [e.g., Figures 2, 5, and 8], whereby the optical disc drive can communicate directly with devices that are peripheral to the PC [e.g., note lines 48-60 of column 2; 13-16 of column 4; lines 24-28 of column 3]. Further, while described with respect to an optical disk drive, Kobayashi et al. taught that such a configuration was equally applicable magnetic disk drives [note lines 21-24 of column 7].



**9.     The following “further” reference(s) are noted:**

**A)** U.S. Patent #6,424,796 to Flannery has been cited because it illustrates an adaptor (e.g., @ 200 of Figure 3) for enabling a computer optical disc drive to be used as a stand alone storage device (i.e., standing alone from a computer).

**10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:**

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**11. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent #6,429,999 to Dague et al.**

A) Dague et al describes computer optical disc drive (note: Figure 1; and lines 13-21 of column 6) which includes:

A) A main body/housing (e.g., @ 10 of Figure 1) having a disc module and a circuit board for controlling the operation of the disc module (note figure 9 and 10); and

B) A “plug” (e.g., @156 and 258 of figure 9) which are positioned outside the main body/housing of the assembled drive (See figure 1) and which are interfaced to the circuit board via a first connector.

B) For completeness, it is noted that in the alternative, claim 1 also reads on the conventional drive disclosed by Dague et al. when the drive is attached to the bus/cable which connects said drive to the computer in which case the bus/cable constitutes the recited “plug” and the connectors (e.g., @ 156 and 158) constitute the recited interface connector.

**12. Claims 2 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent #6,429,999 to Dague et al. for the same reasons as set forth above for claim 1.**

A) With respect to claim 2: The examiner maintains that both the “plug” of Dague et al drive inherently comprises “power jacket”; i.e., non-conductive material surrounding the power conductor/pin.

**13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:**

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**14. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #6,429,999 to Dague et al [an alternative interpretation of the reference as applied to claim 1 (note paragraph 11 of this Office action)].**

A) Dague et al describes computer optical disc drive (note: Figure 1; and lines 13-21 of column 6) which includes:

A) A main body/housing (e.g., @ 10 of Figure 1) having a disc module and a circuit board for controlling the operation of the disc module (note figure 9 and 10); and

B) A connector (e.g., @156 and 258 of figure 9) for connecting the disc drive to a computer.

2) With respect to this interpretation, claim 1 differs from Dague et al in the recitation of a "plug".

3) The examiner maintains that it would have been obvious to one of ordinary skill in the art to have used the drive described by Dague et al for its stated purpose; i.e., namely, to have connected the drive to a computer via an appropriate computer bus/cable connected to the connector (e.g., @156 and 258 of figure 9) via the required matching interfacing connector. The attached cable/bus corresponds to the recited "plug".

**15. Claim 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #6,429,999 to Dague et al for the same reasons set forth above for claim 1. Additionally:**

A) With respect to claim 2: The examiner maintains that both the cable/bus and the interfacing connectors of Dague et al inherently comprise "power jackets"; i.e., non-conductive material surrounding the power conductor.

B) With respect to claim 3: The disc drive in Dague et al receives its power from the power source of the computer attached thereto via the attached bus/cable (lines 62-65 of column 7).

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**16. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Document #2004/0088456 A1 to Zhang in view of US Patent #6,078,996 to Kobayashi et al.**

A) Zhang evidences the fact that those of ordinary skill in the art had recognized the desired to use computer disc drives, particularly HDD drive, as a portable storage medium for storing multimedia data provide from various type of multimedia devices. However, as explained by Zhang, such computer disc drives are, by convention, “dumb” devices thereby requiring some type of host computer to communicate with the multimedia devices.

[See paragraphs 0011 and 0021].

B) Zhang recognizes that the solution to the problem is to add intelligence to the computer disc drive so as to allow the drive to communicate directly with the multimedia devices via a “plug” that is positioned to be accessible from the outside of the many body/ housing of the drive (note element 7U of Figure 2B).

[See paragraphs 0022 -0024]

C) Zhang notes that conventional computer disc drive comprise electronics on a printed circuit board contained within (note lines 4-6 of paragraph 0021) and discloses various embodiment in which the intelligence (e.g., various microprocessors and controllers) are added to the circuit board therein. Zhang teaches that the amount of intelligence to be added to the circuit board of the drive is, according to one of the design philosophies “bare-bone” in order to keep the cost of the device as low as possible (note paragraph 0023). However, Zhang recognized, and indeed discloses, other embodiments in which a large amount of intelligence is added making the device “computer-like” (e.g., note paragraph 0022).

D) ***With respect to the limitations of claim 1*** it is noted that, as shown in Figures 2B and 4A, Zhang discloses a computer disc drive comprising:

1) A main body (@ 8 of Figure 2B) having a disc module and a circuit board (e.g., @ 86 of Figure 4A); and

2) A plug (@ 7u of figures 2B and 4A) positioned “outside”<sup>1</sup> of the main body and having a first interface connector (e.g., @ 65i) connected to interface circuitry (e.g., @ 66b) on the circuit board.

Claim 1 differs from the showing of Zhang only in that claim 1 specified the drive to be an optical drive.

As illustrated by the showing of Kobayashi et al (note lines 17-27 of column 7), magnetic and optical disc drives were recognized alternatives in the computer arts and, as such, it would have been obvious to one of ordinary skill in the art to

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<sup>1</sup> To the extent of the examiner’s understanding, the term “outside” is being used here in the same way that it appears to be used instant specification (note paragraph 5 of this Office action).

have substituted an optical disc drive for the magnetic HDD drive described Zhang, given that they are recognized alternative.

**17. Claims 2, 3, 5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Document #2004/0088456 A1 to Zhang in view of US Patent #6,078,996 to Kobayashi et al. for the same reasons that were set forth for claim 1 above.**

A) With respect to claim 2: As shown in figures 6AA-6B, Zhang describes various ways by which the drive might be powered by an external source. Figure 6B teaches providing the power via a conductor of the plug. Such a conductor is inherently insulated with some type of insulating "jacket".

B) With respect to claim 3: While not described explicitly with respect to the embodiment of figure 6B, it is apparent from the illustration of figure 6AB that the interface circuitry includes an internal voltage controller/regulator (note element 68VR).

C) With respect to claim 5: The interface circuit disclosed Zhang (@ 66b) is a conversion circuit for converting the received signal (@ 65i) from the USB format to that which is needed by the disc drive.

D) With respect to claim 7:

1) The interface circuit disclosed Zhang (@ 66b) includes a first (@64HS) and second (@ 64IC) interface elements, wherein the first is compatible with USB and the second is compatible with IDE;

2) Alternatively, when the device is to be simultaneously used as a drive of a computer, as taught via Figures 1 and 4 of Kobayashi et al., it would have been necessary to provide a second computer to drive interface of the appropriate type; e.g., e.g., IDE or ATAP as described in the applied references.

D) With respect to claim 8:

1) When the device is to be simultaneously used as a drive of a computer, as taught via Figures 1 and 4 of Kobayashi et al., it would have been necessary to provide a second computer to drive interface of the appropriate type; e.g., e.g., IDE or ATAP as described in the applied references.

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**18. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Document #2004/0088456 A1 to Zhang in view of US Patent #6,078,996 to Kobayashi et al. for the same reasons that were set forth for claim 1 above, further in view of US Patent #6,859,854 to Kwong.**

A) With respect to claim 4 and 6: As explained in Zhang, the plug used in the illustrated drive comprises a USB plug because, at the time, almost every commercial multimedia device used such USB protocol (note paragraph 0052). However, as illustrated by the showing of Kwong, it was known for such interfaces to have been of other protocols; i.e., including PCMCIA 9note lines 13-17 of column 1). The examiner maintains that it would have been obvious to one skilled in the art to have further modified the drive disclosed by Zhang with additional plug to accept other well known protocols, such as PCMCIA, thereby making the device compatible with a wider variety of devices.

**19. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Document #2004/0088456 A1 to Zhang in view of US Patent #6,078,996 to Kobayashi et al. for the same reasons that were set forth for claim 1 above.**

The examiner takes Official Notice that it was notoriously well known in the computer art to have provided ejection switches for ejecting computer cards from "plugs" in order to ease and/or prevent disengagement. It would have been obvious to have modified the plug in the modified system of Zhang to obtain such benefits.

**20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID E. HARVEY whose telephone number is (571) 272-7345. The examiner can normally be reached on M-F from 7 AM to 3:30 PM.**

**If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.**

**Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).**

**/DAVID E HARVEY/**

**Primary Examiner, Art Unit 2621**

**DAVID E HARVEY**

**Primary Examiner**

**Art Unit 2621**